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10/532,317	05/12/2006	Nghi Nguyen	262808US0PCT	9978

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER
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BERRIOS, JENNIFER A

ART UNIT	PAPER NUMBER
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1619

NOTIFICATION DATE	DELIVERY MODE
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06/22/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,317	<b>Applicant(s)</b> NGUYEN ET AL.	
	<b>Examiner</b> Jennifer A. Berrios	<b>Art Unit</b> 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 March 2010.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 21-44 is/are pending in the application.
- 4a) Of the above claim(s) 26-30, 33, 34, 42 and 43 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-25, 31-32, 35-41, 44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/13/2007 and 4/22/2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election with traverse of Group I, claims 21-41 and 44 in the reply filed on 3/23/2010 is acknowledged. The traversal is on the ground(s) that Examiner has not provided adequate reasons and/or examples to support the conclusion of patentable distinctness between the identified groups. This is not persuasive. Although applicant is correct in the asserting that Examiner has not determined patentable distinctness, it is noted that this is not a requirement for restriction in 371 applications. Examiner is required to demonstrate that the groups lack a special technical feature, which was demonstrated in the restriction requirements mailed 9/23/2009 and in the rejection found below.

2. Applicant further argues that Examiner has not provided any indication that the contents of the claims were interpreted in light of the description. This is not persuasive. In the restriction requirement mailed 9/23/2009 Examiner demonstrated a lack of special technical feature amongst the claims, which are a part of the description.

3. Applicant also argues that as claim 42 directly depends from claim 21, restriction is not proper has unity of invention has to be considered only in relation to the independent claims and not the dependent claims in an international application. This is not persuasive. It is noted that claim 42 does not directly depend from claim 21. It is in fact an independent claim which refers to the composition of claim 21 but does not directly depend from it.

4. Acknowledgement is made of applicant election of the following species (At least claims 21, 23-25, 31-32, 35-41 and 44 reading on the elected species):

- a. Poluquaternium-46; and
- b. Xylose.

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The requirement is still deemed proper and is therefore made FINAL.

5. Claims 26-30, 33-34 and 42-43 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group and/or species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 3/23/2010.

***Priority***

This application is a 371 of PCT/IB02/04734 filed 10/22/2002.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 21-23, 31-32, 38-41 and 44 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Wisotzki et al (US 4,900,545, issued: 2/13/1990).

Wisotzki et al teaches a composition for the regeneration of hair split-ends in an aqueous or aqueous/alcoholic solution or emulsion, containing panthenol, at least one mono- or di-saccharide and optionally polyvinylpyrrolidone (PVP).

Regarding claim 21, 23 and 31: The composition comprises PVP (defined by the instant spec to be a suitable film-forming agent), a film-forming constituent of hair care preparations in amounts ranging from 0.1-0.5 wt% (claim 5 and Col. 2, lines 55-58).

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Regarding claims 21-22 and 32: The mono- or disaccharides are any aldoses and ketoses, preferably pentoses and hexoses. Suitable options include: glucose, mannose, galactose, ribose, arabinose, xylose (elected species – selected from a finite number of options), fructose, sorbose, lactose, maltose or cellobiose (claim 10 and Col. 2, lines 35-42).

Regarding claim 37: The composition is in the form of aqueous or aqueous/alcoholic, solutions or emulsions (Abs, claim 1 and Col. 2, lines 13-15).

Regarding claim 39: Other surfactants, such as ampholytic, zwitterionic and/or non-ionic surfactants may be present in the composition (Col. 4, lines 48-51).

In the alternative, while Wisotzki teaches pentoses and hexoses as opposed to the claimed C3 to C5 monosaccharides, Wisotzki teaches both hexoses and pentoses are equally effective in regenerating and revitalizing hair and teaches sugars in the same amounts defined in the instant specification. As such one of skill in the art would be motivated to elect a C5 monosaccharide, such as xylose for use in the composition. Wisotzki also states that technically all naturally occurring mixtures of mono or disaccharides are suitable for the hair regenerating hair-split ends and revitalizing hair.

Regarding claims 21, 40-41 and 44: As the composition of the prior art teaches a film-forming agent in the amounts recited by the instant claims and a C3-C5 monosaccharide in amounts recited by the instant specification, absent showing evidence to the contrary, the composition of the prior art and the composition recited are expected to have the same properties, as they have the same structural limitations. As such, the hair compositions containing sugars of Wisotzki would be expected to possess the ability to impart the claimed durable non-permanent shaping of hair fibers.

*It is noted that In re Best (195 USPQ 430) and In re Fitzgerald (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter*

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*shown to be in the prior art does not possess characteristic relied on" (205 USPQ 594, second column, first full paragraph).*

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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12. Claims 21-25, 31-32, 35-41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Beck et al (US 2002/0031483, pub. date: 3/14/2002).

Regarding claim 21-22 and 32: Beck teaches a hair treatment composition comprising a compound chosen from a TCA cycle intermediate, a carbohydrate, a sugar, a fatty acid product or a glycolysis product. Appropriate sugars include trioses such as glyceraldehydes (aldose), and dihydroxyacetone (ketose), tetroses such as erythrose, threose, and erythrulose, pentoses such as ribose, arabinose, xylose, lyxose, ribulose and ribulose phosphate and xylulose

Further, Beck teaches furanoses, pyranoses, phosphate derivatives of sugars [0015].

Regarding claim 21, 23-25 and 31: Beck teaches the film-forming cationic polymers such as Polyquaternium 16, which is also claimed [0041]. Beck also teaches that the composition preferably contains 0.01% to 0.5% of the useful compounds [0018].

Regarding claim 38: Beck teaches the compositions in the form of a shampoo or used in a conditioner composition, which read on the instant dispersion or emulsion [0020].

Regarding claim 39: Further, Beck suggests addition of suitable surfactants, polymers, conditioning agents, adjunct materials and water to the compositions (pages 2 and 3, and examples 4-9 on page 5).

Beck teaches that the composition is used for hair treatment, in particular for oxygen consumption of hair follicle and thus stimulating the hair growth. Beck does not teach instant durable non-permanent shaping of hair. As the amount of compounds taught by Beck is within the ranges of monosaccharides recited in the instant specification and the film-forming polymer is in amounts recited by the instant claims. Accordingly, it would have been obvious of one of an ordinary skill in the art at the time of the instant invention to use the monosaccharides i.e., trioses, tetroses etc., containing various cosmetic additives such as cationic polymers (Polyquaternium series of compounds) in the hair treatment composition in the range of 0.01 to

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0.5% with an expectation to stimulate the growth of hair follicle because Beck suggests that the sugars provide the required oxygen supply for the growth of hair follicle.

While Beck does not recognize the claimed effect, Beck teaches sugars in the same amounts as claimed. Accordingly, absent showing evidence to the contrary, the hair compositions containing 0.01% to 0.5% of sugars such as trioses or tetroses possess the ability to impart the claimed durable non-permanent shaping of hair fibers.

Regarding claims 21, 40-41 and 44: As the composition of the prior art teaches a film-forming agent in the amounts recited by the instant claims and a C3-C5 monosaccharide in amounts recited by the instant specification, absent showing evidence to the contrary, the composition of the prior art and the composition recited are expected to have the same properties, as they have the same structural limitations, as such the hair compositions of Beck would be expected to possess the ability to impart the claimed durable non-permanent shaping of hair fibers.

*It is noted that In re Best (195 USPQ 430) and In re Fitzgerald (205 USPQ 594) discuss the support of rejections wherein the prior art discloses subject matter which there is reason to believe inherently includes functions that are newly cited or is identical to a product instantly claimed. In such a situation the burden is shifted to the applicants to "prove that subject matter shown to be in the prior art does not possess characteristic relied on" (205 USPQ 594, second column, first full paragraph).*

Regarding claims 35-37: Beck teaches the composition to preferably comprise an aldose, a ketose, glucose, galactose, fructose and/or citrate. As Beck teaches that different sugars have the ability to provide the required oxygen supply for the growth of hair fibers, one of skill in the art would have been motivated to combine functional equivalents (different saccharides) for the same purpose (use in hair compositions to provided oxygen for the growth of hair fibers) in order to create a third composition. One of skill in the art would also be



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motivated to optimize the quantity of additional sugars use and the total quantity of sugar, in order to optimize the quantity of oxygen supplied.

*MPEP 2144.05 II: "Generally, differences in concentration or temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration or temperature is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (Claimed process which was performed at a temperature between 40°C and 80°C and an acid concentration between 25% and 70% was held to be prima facie obvious over a reference process which differed from the claims only in that the reference process was performed at a temperature of 100°C and an acid concentration of 10%.)"*

13. Claims 21-25, 31-32, 35-41 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wisotzki et al (US 4,900,545), Beck et al (US 2002/0031483) and BASF (Polymeric Luviquat Grades, May 1998).

Claims 21-23, 31-32, 38-41 and 44 are taught in the Wisotzki 102b/103 rejection above.

Regarding claims 35-37: Wisotzki et al teaches at least one mono- or di-saccharide.

The mono- or disaccharides are any aldoses and ketoses, preferably pentoses and hexoses.

Suitable options include: glucose, mannose, galactose, ribose, arabinose, xylose (elected species – selected from a finite number of options), fructose, sorbose, lactose, maltose or cellobiose (claim 10 and Col. 2, lines 35-42). As Wisotzki teaches that different sugars can be used and the composition can comprise more than one, one of skill in the art would have been motivated to combine functional equivalents (different saccharides) for the same purpose (use in hair compositions) in order to create a third composition. One of skill in the art would also be motivated to optimize the quantity of additional sugars use and the total quantity of sugar, in order to optimize the regeneration and revitalization of the hair

Wisotzki teaches the elected xylose, but does not teach the composition to comprise a cationic film-forming polymer specifically, polyquaternium-46.

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Beck as mentioned above teaches a hair treatment composition comprising a compound chosen from a TCA cycle intermediate, a carbohydrate, a sugar, a fatty acid product or a glycolysis product. Appropriate sugars include trioses such as glyceraldehydes (aldose), and dihydroxyacetone (ketose), tetroses such as erythrose, threose, and erythrulose, pentoses such as ribose, arabinose, xylose, lyxose, ribulose and ribulose phosphate and xylulose

Further, Beck teaches furanoses, pyranoses, phosphate derivatives of sugars [0015].

Beck also teaches the film-forming cationic polymers such as Polyquaternium 16, which is also claimed [0041]. Beck also teaches that the composition preferably contains 0.01% to 0.5% of the useful compounds [0018].

BASF teaches polyquaternary polymers for hair and skin care. BASF teaches various Luviquat grades of polymers, known as polyquaternium-11, polyquaternium-16, polyquaternium-44 and polyquaternium-46 (Pg. 2) and examples of how each polyquat can be used. BASF teaches that Luviquat PQ 11 (polyquat-11), Luviquat Hold (polyquat-46) and Luviquat HM 552 (polyquat-16) are good choices for products that provide conditioning effect and good hold. However, a particular advantage of Luviquat Hold (elected species) is that, compared with other polyquaternary compounds, it produces a very low-tack film (Pg 4).

It would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Wisotzki/Beck and BASF. One of skill in the art would have recognized that both Wisotzki and Beck teach film-forming polymers (Wisotzki - PVP and Beck - polyquat-16), used in combination with sugars for the creation of topical hair preparations. As such one of skill in the art would have recognized these film-forming polymers to be functional equivalents, which could be interchanged, absent evidence to the contrary. Furthermore, BASF teaches different polyquat grades, therefore one of skill in the art would have been motivated to utilize a different polyquat, such as polyquaternium-46, as BASF

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teaches that this polyquat has particular advantages over other polyquat, in that it produces products with less-tack. One of skill in the art would expect reasonable success as both Wisotzki and Beck teach hair composition comprising sugars in combination with film-forming polymers and BASF teaches polyquaternary polymers, which are all utilized for the same purposes, however some show preferable advantages over others, such as polyquaternium-46.

### ***Double Patenting***

14. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 21, 23-25, 31, 35-41 and 44 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1, 8, 13, 38-41 and 43 of U.S. Patent No. 7,459,150. Although the conflicting claims are not identical, they are not patentably distinct from each other because they overlap in scope.

The instant claims recite a composition having a film-forming agent and a saccharide compound. The '150 patent in claim 1 and 8 disclose a composition comprising a quaternary ammonium compound, which can be selected from polyquaternium-16 (film-forming agent) and one C5 to C7 saccharide unit substituted with at least one amino group. Claim 13 defined the polyquat to be present in amounts ranging from 0.01-10 wt%, thus overlapping with the instantly claimed ranges of the film-forming agent. The instant claims do not define the quantity of saccharide compound present in the composition, however one of skill in the art would look to the instant specification for guidance to define the required amounts. The '150 patent teaches the saccharide compound to be present in amounts ranging from 0.01-10wt%, thus overlapping with the ranges of saccharide recited in the instant specification. As such, the US '150 patent teaches the film-forming agent and the recited saccharide component in amounts defined by the instant specification and the claims to be effective at imparting a durable non-permanent hold to the keratinous fiber.

### ***Conclusion***

No claims are allowable.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Berríos whose telephone number is (571)270-7679. The examiner can normally be reached on Monday-Thursday: 7:00am-4:00pm (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 270-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jennifer A Berríos/  
Examiner, Art Unit 1619

/Tracy Vivlemore/  
Primary Examiner, Art Unit 1635